Applicant respectfully disagrees that this passage, or any other passage, in the Nachaliel et al. application discloses or suggests determining the depth position of lesion using orthogonal lead fields.

The Nachaliel et al. reference, like the subject matter disclosed and claimed in the present application, concerns a method for localizing anomalies or a lesion using impedance measurement technology.

In impedance measurement technology, electrical signals in a number of frequency ranges are injected into an examination region using a number of electrodes. The response signals are evaluated for the purpose of determining a maximum signal value in the context of the particular arrangement of the electrodes. The location of the maximum signal value corresponds to the location of the anomaly or lesion in two coordinate directions. It still remains, however, to determine the location of the anomaly in the third coordinate direction.

For this purpose the Nachaliel et al. reference proceeds in a completely different manner than the subject matter disclosed and claimed in the present application. As noted above, in the subject matter disclosed and claimed in the present application the depth position of an anomaly or lesion is determined using orthogonal lead fields. In the passage in Nachaliel et al. cited by the Examiner at column3, lines 29-35, it is explicitly stated that the position and the depth are determined from a number of impedance maps. This ensues based on the width of the image of the subject (as claimed in claim 68 of the Nachaliel et al. reference) or from the signal strength (as claimed in claim 69). This is also described in more detail in the Nachaliel et al. reference in Figures 4A, 4B and 4C and the associated explanation beginning at column 17, line 21 of the Nachaliel et al. reference.

In this regard, the Nachaliel et al. reference discloses no more than the conventional approach described in the introductory portion of the present application at page 2.

By contrast to the conventional approach disclosed in the Nachaliel et al. reference, in the method disclosed and claimed in the present application, orthogonal lead fields are used to determine the depth of a lesion below a maximum. Details regarding orthogonal lead fields, from which it is apparent that they differ completely in concept and use from the impedance mapping disclosed in the Nachaliel et al. reference, can be found in the article by the inventor entitled "Towards Virtual Electrical Breast Biopsy: Space-Frequency MUSIC for Trans-Admittance Data," that is submitted with the Information Disclosure Statement filed simultaneously herewith.

In accordance with the present invention, model data are generated at each raster location with the normalized and orthogonal lead fields. This model data are then compared with the (predominantly frequency-independent) signal space acquired from the measurement data. The locations at which a measurement of the distance between signal space and model data space approaches a local minimum are the location of an actual signal source, and thus correspond to the location of the anomaly or lesion. This is described in detail in the present application in the last paragraph at page 11.

The Nachaliel et al. reference, therefore, does not disclose all of the method steps of claim 1 as arranged and operating in that claim, and thus does not anticipate claim 1.

Early reconsideration of the application is therefore respectfully requested.

Submitted by,

Steven H. Noll (Reg. 28,982)

SCHIFF, HARDIN LLP
CUSTOMER NO. 26574
Patent Department
6600 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606
Telephone: 312/258-5790
Attorneys for Applicant.

CH1\ 4662528.1